

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-027344**Date Inspected:** 20-Mar-2012**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** As noted below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** SAS OBG**Summary of Items Observed:**

Quality Assurance Inspector (QA) Douglas Frey was at the American Bridge/Fluor (ABF) job site at Yerba Buena Island in California between the times noted above in order to monitor Quality Control functions and the in process work being performed by ABF personnel. The following items were observed:

**8W PP70.5 W2-DAH (Interior)**

This QA Inspector made random observations of Shielded Metal Arc Welding (SMAW) of the Deck Access Hole (DAH) located at 8W PP70.5 W2 on the interior of the OBG. ABF welder Eric Sparks (ID 3040) was observed welding in the 4G overhead position utilizing 3.2mm E7018-H4R electrodes that were obtained from a remote baking oven verified by this QA Inspector. QC Inspector Steve Jensen was present to monitor the welding and the parameters to ensure compliance with ABF-WPS-D1.5-1010-Revision 1. The welder was observed cleaning the work between passes and employed a small disc grinder to blend the start/stop edges for a smooth transition, as the QC Inspector measured the inter-pass temperatures. This QA Inspector made subsequent observations throughout the shift to monitor quality and noted that the work at this location is in progress and appeared to be in general conformance with the contract specifications.

**9W PP84.5 W2 LS-E (Interior)**

This QA Inspector randomly observed ABF welder Mike Jimenez (ID 4671) performing the SMAW process in the 3G vertical position on the LS-E of the DAH located at 9W PP84.5 W2 on the interior of the OBG. Mr. Jimenez was observed utilizing 3.2mm E9018-H4R electrodes with amperage of 126 and this QA Inspector

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verified that they were secured from a remote baking oven in the general vicinity. It was noted that a Pro-Heat induction heating system was incorporated to provide continuous heat to the joint. Upon completion of the work, the welder was observed utilizing a small disc grinder to remove excess weld reinforcement and blend the weld to a near flush surface condition. It was noted that the heat induction system was applied for three (3) hours upon completion of the work.

### 9E PP84.5 E5-DAH (Exterior)

This QA Inspector made random observations of the Flux Core Arc Welding (FCAW) of the DAH located at 9E PP84.5 E5 on the exterior of the OBG. QC Inspector Steve Jensen monitored the welding and the parameters which were recorded as; Amps=285, Volts=25.5, and TS=375 for a heat input of 1.2 joules/hr. ABF welder Salvador Sandoval (ID 2202) performed the welding in the 1G flat position and between passes was observed grinding and cleaning the work by employing a small disc grinder, brushes and compressed air. This QA Inspector made subsequent observations throughout the shift and noted that the work was in progress and appeared to be in general conformance with ABF-WPS-D1.5-3010-1.

### 8E PP70.5 E2-DAH (Exterior)

This QA Inspector randomly observed ABF welder Rick Clayborn performing the back-gouge operation of ultrasonic rejectable indications on "A" Deck Access Hole located at 8E PP70.5 E2 on the exterior of the OBG. The dimensions of the excavations are listed below. This QA Inspector observed QC Inspector Sal Merino perform a Magnetic Particle Inspection (MT) of the excavation to determine the soundness of the metal. Upon completion of the testing this QA Inspector verified that no rejectable indications were present.

y+200mm: 90mm in length, 20mm wide and 7mm deep.

y+1725mm: 90mm in length, 20mm wide and 10mm deep.

y+1860mm: 90mm in length, 20mm wide and 10mm deep.

y+2110mm: 80mm in length, 20mm wide and 11mm deep.

y+2370mm: 330mm in length, 20mm wide and 10mm deep.

y+3250mm: 75mm in length, 20mm wide and 10mm deep.

This QA Inspector randomly observed ABF welder Rick Clayborn performing the repair welding operation of six (6) ultrasonic indications as per the SMAW process in the (1G) flat position on the "A" deck DAH located at 8E PP70.5 E2 on the exterior of the OBG. This QA Inspector observed the use of E7018-H4R electrodes and QC Inspector Steve Jensen verify that the preheat temperature was at the minimum of 66 degrees C and that the welding parameters (Amps=135) were in accordance with WPS D1.5-1001- Repair. The welding parameters observed at this location appeared to be in general compliance with approved WPS and the contract specifications.

### Summary of Conversations:

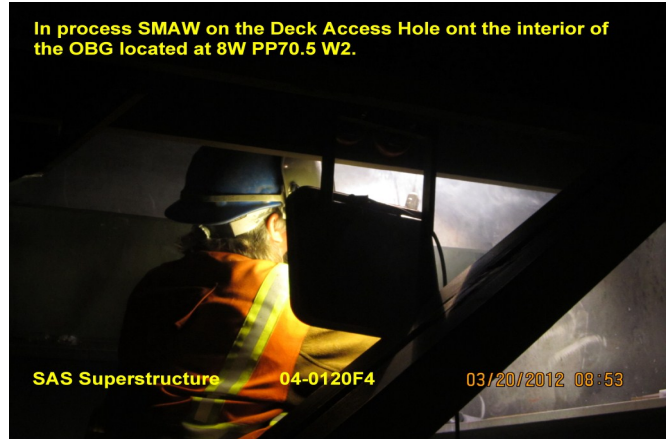
As noted above.

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### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy 510-385-5910 , who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Frey,Doug	Quality Assurance Inspector
<b>Reviewed By:</b>	Levell,Bill	QA Reviewer

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